REMARKS

Claims 1-8 were pending in the application. New claim 9 is added by this amendment. Accordingly, claims 1-9 are now pending in the application.

Claims 1 and 4 stand rejected under 35 U.S.C. § 103(a) as being obvious considering United States Patent No. 6,716,114 to Nishio (the '114 patent or Nishio) in view of United States Patent No. 5,947,840 to Ryan, United States Patent No. 5,935,020 to Stites et al. and United States Patent No.6,033,320 to Bamberger. Applicant respectfully traverses the rejection as to claims 1 and 4 and believes that in any event new claim 9 is allowable over the cited references.

The coordinate system and datum used by the '114 patent to describe the location of the center of gravity of the golf club head disclosed therein differ significantly from the coordinate system and datum used by applicants in the present application. As a result, both the *direction* of the dimension "L" in Nishio and the *datum plane* for the dimension "D" in Nishio are different from the corresponding dimensions ΔA and ΔC disclosed and claimed in the present application. Therefore, although the absolute value of the dimensions disclosed in Nishio are approximately the same as the corresponding dimensions in the present invention, in fact, they do not disclose or suggest the same critical region for locating the center of gravity disclosed in the present application.

As shown in the marked-up version of Fig.2 of the '114 patent attached hereto as Exhibit "A," the '114 patent measures the distance "D" from the plane of the face 2a, whereas in the present invention the distance ΔC is measured from the plane of the shaft axis P_3. Thus, ΔC is not equal to "D," but is actually "D" minus the shaft progression distance "Sp."

Moreover, the '114 patent measures the distance "L" *radially* from the shaft axis on an angle relative to the face, whereas in the present invention the distance ΔA is measured parallel to the face. Therefore, ΔA is not equal to "L," but is actually equal to the square root of "L" squared plus ΔC squared (since ΔA and ΔC form two legs of a right triangle having a hypotenuse "L").

Based on the foregoing, although the '114 patent discloses that "L" is equal to 26-36 millimeters, since "L" is the hypotenuse, a 36 millimeter "L" (the maximum range disclosed in the '114 patent) corresponds to ΔA of only 29 millimeters assuming a ΔC of 20 millimeters (the maximum range disclosed in the present application). Similarly, a 26 millimeter "L" (the minimum range disclosed in the '114 patent) corresponds to ΔA of only 23mm with a ΔC of 12 millimeters (the minimum range disclosed in the present application). Since a ΔC of 23-29 millimeters is outside of the 36 ± 6 millimeters range disclosed and claimed in claim 1, and well outside the 36 ± 1 millimeter range disclosed in new claim 9, the '114 patent does not suggest the critical range disclosed and claimed in the present application.

Additionally, it should be noted that the coordinate system used in the '114 patent is undefined. Although the shaft axis is defined and the plane of the face is defined, the distance from the shaft axis to the face place is undefined. Therefore, although it is *possible* to come up with a combination of dimensions "D" and "L" that would yield a ΔA within the 36 ± 6 millimeter range claimed in the present application, it is only possible to do so because the coordinate system used in the '114 patent is undefined. Since the coordinate system of the '114 patent is undefined it cannot reasonably teach the critical range disclosed and claimed in the present application and, therefore, manipulation of the dimensions "D" and "L" to arrive at

the critical range disclosed in the present application would necessarily constitute impermissible hindsight reconstruction. The teaching or suggestion to make the claimed modification and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In Re Vaeck, 947 F.2d 488, 20 USPQ 1438 (Fed. Cir. 1991); MPEP 2143. Accordingly, for this reason alone, applicants urge that claims 1, 4 and new claim 9 are allowable over the art of record.

Additionally, however, although Nishio, Ryan, Stites et al and Bamberger disclose that the center of gravity *may* be above the center of the face or that the center of gravity *may* be raised or lowered to customize the shot trajectory, none of the references cited by the examiner disclose or suggest that the center of gravity *must* be above the center of the face. Accordingly, for this additional reason, applicants urge that none of the references teach or suggest the center of gravity located within a region 2.1 ± 2.0 millimeters above the center of the face and, therefore, claims 1, 4, and new claim 9 are allowable over the art of record.
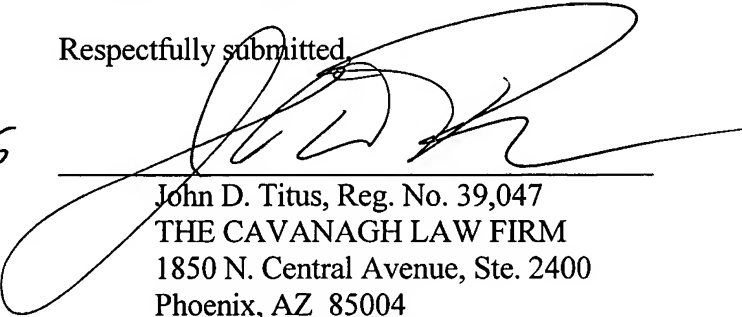
In light of the foregoing, claims 2-3 and 5-8, all of which were rejected based on combinations of Nishio as the primary reference are also allowable over the art of record.

Conclusion

No new matter is introduced by the amendments herein. Support for the

amendments to the specification and claims is found among other places in Fig. 2 as filed. Based on

the foregoing, applicants believe that all claims under consideration are in a condition for allowance

and reconsideration of this application is respectfully requested.

Respectfully submitted,

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